University of Maryland, Baltimore County (UMBC)

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Higher Education
Member since August 2009

MANAGEMENT AND LEADERSHIP

☒ **Environmental Team**

UMBC's Climate Change Commitment Task Force is chaired by VP of Administration & Finance, Lynne Schaefer, and Professor of Economics, Dr. Virginia McConnell. The Task Force is comprised of faculty, staff and students (see http://www.umbc.edu/sustainability/pdf/members.pdf) and is charged with carrying out the university's Climate Change Commitment Charter (See http://www.umbc.edu/sustainability/charter.pdf).

The group meets quarterly or as needed to advise the President on strategies to reduce greenhouse gas emissions generated by the campus community, to engage the campus community in efforts to reduce greenhouse gas emissions, and to promote and support instruction and research on the impact of greenhouse gas emissions.

☒ **Environmental Policy Statement**

http://www.umbc.edu/sustainability/about.html

☒ **Environmentally Preferable Procurement**

UMBC has a policy specifying the procurement of Energy Star-certified products where applicable. Our roof sealant application is Energy Star approved. It reflects sunlight, heat and UV rays, which lowers room temperatures and energy use. It also prolongs the life of the roof which reduces waste sent to landfills. We also purchase gel cell batteries instead of wet lead acid for most applications (emergency light packs, fire alarm panels, high voltage switching battery units, etc.)

☒ **Environmental Restoration or Community Environmental Projects**

UMBC has participated in stream restoration projects in tributary branches of Herbert Run.

WASTE

☒ **Recycling**

In 2008, UMBC recycled the following materials:

Fluorescent light tubes- 0.75 tons
Landscape organics - 74.20 tons
Metals, assorted - 59.82 tons
Paper /cardboard - 146.26 tons
Commingled containers - 38.01 tons
Laser toner cartridges - 140 lbs
Auto batteries - 1420 lbs
Tires - 11,000 lbs
Electronic equipment - 39.35 tons
Frying grease - 24 tons
Antifreeze - 40 lbs
Motor Oil - 4.2 tons
Carpet - 53.55 tons

This amounted to 417.00 tons diverted from the landfill. At $52/ ton for landfill fees, this amounts to approximately $21,077.00 in savings.

We also recycle batteries from classroom clocks, flashlights, cell phones, etc. as well as old software CDs, DVDs, and outdated software disks.

ENERGY

☒ **Energy Efficiency**

UMBC has undertaken the following energy saving measures:

- *Upgraded heating/cooling systems for the campus by retrofitting the Central Plant with high-efficiency boilers, chillers, and hot water pumps.*
- *Installed a thermal storage system to supplement the Central Plant. Charging the million gallon chilled water tank at night reduces the load on the electric grid during peak daytime hours.*

- *Converted air distribution systems from constant air volume to energy-efficient variable air volume (VAV) systems. For this extensive project, UMBC utilized energy performance contracting.*
- *Upgraded heating/cooling systems for student housing by replacing stand-alone units with a Satellite Plant utilizing high-efficiency boilers, chillers, and pumps.*
- *Upgraded pneumatic controls with Direct Digital Controls tied to a Building Automation System with graphical user interface.*
- *Repair roof leaks to maintain the R-value of the roof insulation which lowers energy usage.*
- *Upgraded exterior lighting for roadways, walkways, and parking lots to high-efficiency metal halide lamps.*
- *Upgraded interior lighting from T12 to more efficient T8 and T5 ballasts and lamps. Replaced incandescent bulbs with compact fluorescent lamps.*
- *Eliminated condensing units that used city water for cooling.*
- *Energy Procurement – By combining the buying power of several University System of Maryland (USM) institutions, UMBC purchases natural gas and electricity at reduced rates.*
- *Energy Rebates – By implementing strategic measures to reduce electrical load when the electric grid is stressed by high demand, UMBC increases the reliability of the regions' distribution network and qualifies for energy rebates.*
- *Performance Contracting – Facilities Management is working with an approved Energy Savings Company (ESCO) to perform an energy audit for the campus to identify and quantify additional energy conservation measures (ECMs) that essentially pay for themselves via energy savings.*

☒ **Renewable Energy**

UMBC gets over 19% of its electricity from renewable sources. In addition to the current renewable portfolio standard (RPS) of 4.51%, for FY2009 UMBC purchased Tier 2 RECs (Conowingo Hydroelectric Plant) from Reliant Energy for 15% of 73,422 MWh. UMBC is investigating the feasibility of onsite renewable energy, including solar hot water for heating the pools, solar PV on the roofs of various buildings, and geothermal opportunities. UMBC is also involved in the State's collaborative process for "Generating Clean Horizons," a first-of-its-kind initiative to spur large-scale renewable projects in Maryland.

WATER

☒ **Water Conservation**

Since 2003, UMBC has reduced its water consumption by 19%. Part of our water conservation actions included: changing out water cooled air compressors to waterless units (savings of 1,971,000 gallons per year), replacing a water

aspiration vacuum system within each lab with a centralized vacuum system (savings of 1,250,000 gallons per year), replacing water cooled heat generating lab equipment with a closed processed chilled water secondary loop (savings of 1,330,000 gallons per year), campus wide re-packing of valves and service pumps (savings of 5,000 gallons per year), low flow toilets, urinals, faucets, and shower heads reduce water consumption, and and irrigation controls which minimize evaporation when irrigation is needed.